

**ABSTRACT****USE OF SURFACE MEASURING PROBES**

5 A method of measuring an artefact 5 using a machine 2  
on which a measuring probe 6 is mounted. The probe is  
brought into contact with the artefact and movement  
continued for a limited distance to deflect the stylus  
7. The machine and probe outputs are recorded whilst  
10 the probe is free and when the stylus is deflected. A  
model of the probe and CMM outputs during both contact  
and non-contact between the probe and artefact is  
fitted to the data to allow the contact position when  
the stylus contacts the artefact with zero force to be  
15 determined. The probe outputs may be fitted to the  
model individually to determine a single contact  
position. By using data during movement of the probe  
towards and away from the artefact, errors due to time  
delays may be corrected.

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Fig 3